

INSTITUT FRANÇAIS DU PÉTROLE  
PROCESS FOR SEQUESTERING CARBON IN THE FORM OF A MINERAL IN  
WHICH THE CARBON HAS OXIDATION NUMBER +3

5

Hervé TOULHOAT, François ROPITAL and Sébastien DUVAL

ABSTRACT

A process for sequestering carbon emitted into the atmosphere in the form of CO<sub>2</sub>

10 comprises:

- a) a step for concentrating CO<sub>2</sub> in the liquid phase;
- b) a step for electro-reduction in an aprotic medium to a compound in which the carbon changes to oxidation number +3 in the form of oxalic acid or formic acid;
- c) if appropriate, a step for re-extracting oxalic or formic acid in the aqueous phase; and
- 15 d) a step for mineralization by reaction with a compound of an element M, resulting in a stable compound in which the atomic ratio C/M is about 2/1.